**IN THE CLAIMS:**

Claims 1-3. (Canceled)

4. (Currently Amended) The vapor collection canister of claim [[~~3~~]] 5, wherein a first one of the plurality of temperature sensors is disposed proximate the first port, a second one of the plurality of temperature sensors is disposed proximate the second port, and a third one of the [[~~the~~]] plurality of temperature sensors is disposed intermediate the first one and the second one.

5. (Currently amended) A [[~~The~~]] vapor collection canister ~~of claim 3, wherein~~ for an on-board fuel vapor emission control system, comprising:

a housing defining a flow path between a first port and a second port, the housing ~~comprises~~ including a first wall, a second wall and a third wall extending between the first wall and the second wall;

an adsorbent disposed in the housing; and

a plurality of temperature sensors exposed to the adsorbent.

6. (Currently amended) The vapor collection canister of claim 5, further comprising a partition wall having a proximate end, a distal end, and first and second edges and first and second faces extending between the proximate end and the distal end, the proximate end being mated with the [[~~the~~]] first housing wall, the distal end being spaced from the second housing wall, and the first and second edges being mated with the third housing wall.

7. (Original) The vapor collection canister of claim 6,

wherein the first port is disposed on the first housing wall adjacent the partition wall first face, the second port is disposed on the first housing wall adjacent the partition wall second face, and

wherein the flow path includes a first portion and a second portion, the portion being defined by the first port, the partition wall first face and the third housing wall, and the second portion being defined by the second port, the partition wall second face and the third housing wall.

8. (Original) The vapor collection canister of claim 7, further comprising a first lead frame and a second lead frame, the first lead frame being disposed in the first flow path portion and being mated to the partition wall first face, and the second lead frame being disposed in the second flow path portion and being mated to the partition wall second face.

9. (Original) The vapor collection canister of claim 8, wherein a first one of the plurality of temperature sensors is disposed on the first lead frame, and a second one of the plurality of temperature sensors is disposed on the second lead frame.

10. (Original) The vapor collection canister of claim 9, wherein the first one of the plurality of temperature sensors is disposed proximate the first port, the second one of the plurality of temperature sensors is disposed proximate the second port, and additional ones of the plurality of temperature sensors are disposed on the first and second lead frames intermediate the first one and the second one, along the first and second portions of the flow path.

11. (Original) The vapor collection canister of claim 10, further comprising a plurality of sensor leads disposed on the first and second lead frames, the plurality of sensor leads being electrically connected to respective ones of the plurality of temperature sensors.

12. (Currently Amended) The vapor collection canister of claim 12, further comprising:

a connector terminal including a connector terminal power lead, a connector terminal ~~gound~~ ground lead and a connector terminal signal lead; and

a printed circuit board,

wherein the power lead, ground lead and signal lead of the connector terminal are electrically connected to the printed circuit board,

wherein each of the plurality of sensor leads includes a sensor power lead and a sensor signal lead, each of the plurality of sensor leads being electrically connected to the printed circuit board, and

wherein a common ground lead is electrically connected to each of the plurality of sensors.

13. (Original) The vapor collection canister of claim 12, wherein the plurality of temperature sensors comprises thermisters.

14. (Currently Amended) An on-board fuel vapor emission control system for an internal combustion engine comprising:

a vapor collection canister, the vapor collection canister including a housing defining a first port and a second port, an adsorbent disposed in the housing, and at least one temperature sensor exposed to the adsorbent;

a first conduit providing fluid communication between a fuel tank headspace, the first port of the vapor collection canister, and an intake manifold of the internal ~~combusion~~ combustion engine; and

a second conduit providing fluid communication between the second port of the vapor collection canister and ambient atmosphere.

15. (Original) The on-board fuel vapor emission control system of claim 14, further comprising a flow path between the first port and the second port,

wherein the at least one temperature sensor comprises a plurality of temperature sensors, a first one of the plurality of temperature sensors being disposed proximate the first port, a second one of the plurality of temperature sensors being disposed proximate the second port, and a third one of the plurality of temperature sensors being disposed intermediate the first one and the second one.

16. (Original) The on-board fuel vapor emission control system of claim 15, further comprising a plurality of sensor leads, each of the plurality of sensor leads including a sensor power lead and a sensor signal lead, the plurality of sensor leads being electrically connected to respective ones of the plurality of temperature sensors.

17. (Currently Amended) The on-board fuel vapor emission control system of claim 16, further comprising a printed circuit board,

wherein the vapor collection canister includes a connector terminal having a connector terminal power lead, a connector terminal ~~gound~~ ground lead and a connector terminal signal lead, the power lead, ground lead and signal lead of the connector terminal being electrically connected to the printed circuit board,

wherein each of the plurality of sensor leads is electrically connected to the printed circuit board, and

wherein a common ground lead is electrically connected to each of the plurality of sensors.

18. (Original) The on-board fuel vapor emission control system of claim 17,

wherein the first conduit comprises a solenoid actuated purge valve, and

wherein the second conduit comprises a pressure management valve for managing the pressure in the vapor collection canister and the fuel tank head space, the printed circuit board being disposed in the pressure management valve.

19. (Original) The on-board fuel vapor emission control system of claim 18, further comprising an electronic control unit, the electronic control unit being electrically connected to the printed circuit board for receiving a control signal from one of the plurality of temperature sensors, and being electrically connected to the solenoid actuated purge valve for sending an actuating control signal to the purge valve.

20. (Currently Amended) A method of measuring the saturation of an adsorbent disposed in a flow-path of a vapor collection canister, the vapor collection canister including a housing, an adsorbent disposed in the housing, and a plurality of temperature sensors exposed to the adsorbent, the housing including a first wall, a second wall and a third wall extending between the first wall and the second wall, the method comprising:

monitoring an adsorption front in the vapor collection canister; and

signaling a location of the adsorption front.

21. (Currently Amended) The method of claim [[~~21~~]] 20, wherein the monitoring the adsorption front comprises measuring a temperature of at-least one portion of the adsorbent.

22. (Currently Amended) The method of claim [[~~21~~]] 20, wherein the adsorption front is located at approximately 25% of the length of the flow-path.

23. (Currently Amended) The method of claim [[~~21~~]] 20, wherein the adsorption front is located at approximately 50% of the length of the flow-path.

24. (Currently Amended) The method of claim [[~~21~~]] 20, wherein the adsorption front is located at approximately 75% of the length of the flow-path.

25. (Currently Amended) The method of claim [[~~21~~]] 20, wherein the adsorption front is located at approximately 100% of the length of the flow-path.

26. (New) The on-board fuel vapor emission control system of claim 14, wherein the housing comprises a first wall, a second wall and a third wall extending between the first wall and the second wall.